# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 60-011122
(43)Date of publication of application : 21.01.1985

(51)Int.CI. G01J 3/42

(21)Application number : 58-120028
(22)Date of filing : 01.07.1983

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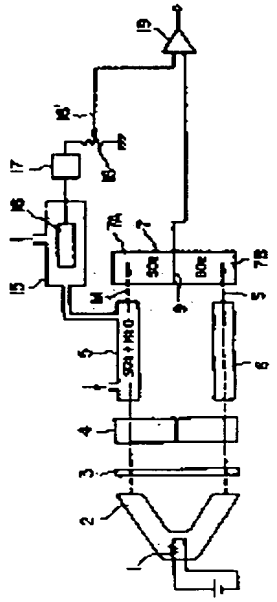
## (54) METHOD FOR COMPENSATING INTERFERENCE IN NON-DISPERSIVE TYPE INFRARED ANALYSIS

(57)Abstract:
PURPOSE: To compensate interference owing to a coexisting gas by subtracting the output of a sensor which responds to the concn. of the interfering gaseous component in a sample gas from the output of the concn. of the component in the gas to be measured in the sample gas and the concn. of the component in the coexisting gas which coexists in the sample gas.
CONSTITUTION: The measuring luminous flux M from a luminous flux distributor 2 and a reference luminous flux S are intermitted alternately by a chopper 3 and are made incident via an interference cell 4 to a measuring cell 5 and a reference cell 6. There is no IR absorption in the cell 6 and the flux S is made incident to the chamber 7B of a detector 7. The flux M transmitted through the cell 5 absorbs a part of IR rays by a sample gas SO2 and H2O and is made incident to the chamber 7A of the detector 7. The output from the detector 7 is the sum of the outputs for the gas SO2 to be measured and coexisting gas H2O in the sample gas and since the output from a DA converter 18 is the output for the coexisting gas H2O, the differential output from a differential amplifier 19 is only the gas to be measured SO2 and the interference by the coexisting gas is compensated.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's

decision of rejection]
[Date of extinction of right]

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SIEI ★ S03 83-754335/36 ★EP -87-077-A

**Optically analysing gas mixt. by infrared radiation - with allowance for changes in source intensity and receiver sensitivity**

SIEMENS AG 23.02.82-DE-206427

*J04 (51.08.83) G01n-21/31*

10.02.83 as 101291 (1480RH) (G) No.SR.Pub E(DE FR GB IT)

For optical analysis of the n components in a flowing gas mixt. the mixt. travels in a conduit (1) with an infra-red radiation source (3) outside a window in one side and at the other side a photoelectric receiver (6) with n measurement channels to measure total extinction for effective wave lengths in the absorption bands of the components.

A calculator (9) determines the specific extinction and hence the amt. of each component, using a linear equation system of n Lambert-Beer determinations. The measurement channels have an extra wavelength channel so that allowance can be made for changes in source intensity and receiver sensitivity for the component-related output signals.

Suitable e.g. for measuring CO, SO2 and H2O vapour in gas. No comparison radiation operation is necessary. (8pp Dwg.No.1/1)

N83-156202 S3-E4A9